Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

No.	M. European Time.	Beginning.	End.	Mag.	Note.
105	Oct. 21, 10^h 45^m P.M.		Near β *Urs. Maj.*	*	Fireball, seen at Copenhagen, and Bornholm. Train in 2m.
106	Nov. 16, 3 17 A.M.	170° + 35°	197° + 41°	2	Train, yellow.
107	34	167 + 25	176 + 17	3	
108	39	158 + 45	162 + 33	3	
109	39	154 + 50	166 + 68	2	
110	44	123 + 29	111 + 35	3	Train.
111	48	166 + 7	174 + 1	4	Nos. 106–111 observed at Odder.
112	17, (?)		N.N.E.	*	Fireball, seen at Aalborg. 10s.
113	Dec. 19 11 2 P.M	90 + 8	88 − 9	*	Fireball. seen at Horsens. Red and blue.

Aurora Borealis.

A most magnificent display of northlight was seen here in Denmark on the night of September 9–10. In Odder I observed the phenomenon from 8^h 30^m to 11^h 15^m P. M., and noted all remarkable circumstances. At 9^h 30^m and again at 9^h 42^m the corona appeared near ε *Cygni*. At this moment the electric bells in the great telegraph station at Fredericia rang without any visible cause, and the telegraphic service was disturbed for hours during the auroral displays. A very large sun-spot crossed the Sun's central meridian at this very time, and its connection with the northlight is evident. Also it may be noted that we had very hot weather, unusual for the season, in the beginning of September, October, and November — and every time large sun-spots were observed.

PLANETARY PHENOMENA FOR MARCH AND APRIL, 1899.

By Professor Malcolm McNeill.

March.

Mercury is an evening star during the whole month, and for the latter half of the month it is far enough away from the Sun to be seen in the evening twilight. It comes to greatest eastern elongation with the Sun on March 24th, and on that date sets a little more than an hour and a half after sunset.

Venus is still a morning star, having passed its greatest western elongation on February 10th. Owing to its greater south declination the interval between the time of sunrise and the rising of the planet is much less than the interval between times of transit, and at the close of the month the former interval is only a little more than an hour and a half. During March *Venus* moves 36° east and 8° north through the constellation *Capricorn* into *Aquarius*. The Moon passes a short distance north of the planet on the morning of March 8th, and will occult it for some places.

Mars sets somewhat earlier than before, but still remains above the horizon until long after midnight. It is in the constellation *Gemini*, and moves 6° eastward and 2° southward from a point 7° south of *Castor* (α *Geminorum*), the northerly one of "the twins," to a point nearly on the line from *Castor* to *Pollux* (β *Geminorum)*, and at a distance from the latter about equal to the distance between *Castor* and *Pollux*. Its distance in millions of miles from the Earth increases from 80 to 103, and its brightness diminishes nearly in the ratio of the inverse squares of those numbers.

Jupiter is gradually getting into position for evening observation. At the close of the month it rises before 9 P. M. It is in the western part of the constellation *Libra*, and moves about 2° westward and 1° northward away from α *Libræ* and toward *Spica* (α *Virginis*).

Saturn rises two hours earlier than in February. It lies on the border of the constellations *Ophiuchus* and *Sagittarius*, and moves about 1° eastward during the month.

Uranus rises about an hour earlier than *Saturn*. It is in the constellation *Scorpio*, about 5° north of the principal star, *Antares*, and it moves a fraction of a degree westward during the month.

Neptune is in the extreme eastern part of *Taurus*.

APRIL.

Mercury is an evening star at the beginning of the month, setting considerably more than an hour after sunset, but it rapidly approaches the Sun, and passes inferior conjunction on April 12th. It then rapidly recedes from the Sun, and by the end of the month rises nearly an hour before sunrise.

Venus and the Sun are coming nearer together, and by the end of the month the planet rises less than an hour and a half before sunrise. It moves 33° eastward and 11° northward through the constellation *Aquarius* into *Pisces*.

Mars is still above the horizon until after midnight. It is in the constellation *Gemini* at the beginning of April, and during the month it moves about 12° eastward and 3° southward from a point nearly on line with *Castor and Pollux* to a point between γ *Cancri* and the "bee-hive" cluster in *Cancer*. It reaches its maximum distance from the Sun on April 8th, and its distance from the Earth increases from 103,000,000 to 130,000,000 miles.

Jupiter is above the horizon nearly the entire night, and it comes to opposition with the Sun on April 25th. It moves westward about 3° and northward 1°. It lies between α *Libræ* and α *Virginis*, a little nearer the former, and toward the close of the month is about 1° north of γ *Virginis*.

Saturn toward the close of the month rises at a little after 10 P. M. It is in about the same position among the stars as before; but on April 2d it begins to retrogade; and at the end of the month it is in just about the same position it occupied on March 1st.

Uranus rises two hours earlier than during March, and has about the same position among the stars. It is about 5° north of *Antares* (α *Scorpii*), and moves a little less than 1° westward.

Neptune retains its position in *Taurus*.

EXPLANATION OF THE TABLES.

The phases of the Moon are given in Pacific Standard time. In the tables for Sun and planets, the second and third columns give the Right Ascension and Declination for Greenwich noon. The fifth column gives the local mean time for transit over the Greenwich meridian. To find the local mean time of transit for any other meridian, the time given in the table must be corrected by adding or subtracting the change per day, multiplied by the fraction whose numerator is the longitude from Greenwich in hours, and whose denominator is 24. This correction is seldom much more than 1^m. To find the standard time for the phenomenon, correct the local mean time by *adding* the difference between standard and local time, if the place is west of the standard meridian, and *subtracting*, if east. The same rules apply to the fourth and sixth columns, which give the local mean times of rising and setting for the meridian of Greenwich. They are roughly computed for lat. 40°, with the noon Declination and time of meridian transit, and are intended as only a rough guide. They may be in error by a minute or two for the given latitude, and for latitudes differing much from 40° they may be several minutes out.

PHASES OF THE MOON, P. S. T.

		H. M.		H. M.
Last Quarter,	Mar. 4,	8 7 P. M.	Apr. 3,	3 56 A. M.
New Moon,	Mar. 11,	11 53 A. M.	Apr. 9,	10 21 P. M.
First Quarter,	Mar. 18,	7 24 P. M.	Apr. 17,	2 43 P. M.
Full Moon,	Mar. 26,	10 18 P. M.	Apr. 25,	11 22 A. M.

THE SUN.

1898.	R. A. H. M.	Declination. ° ′	Rises. H. M.	Transits. H. M.	Sets. H. M.
Mar. 1.	22 49	− 7 33	6 39 A.M.	12 13 P.M.	5 47 P.M.
11.	23 26	− 3 41	6 22	12 10	5 58
21.	0 2	+ 0 16	6 6	12 7	6 8
Apr. 1.	0 42	+ 4 34	5 49	12 4	6 19
11.	1 19	+ 8 21	5 33	12 1	6 29
21.	1 56	+ 11 53	5 18	11 59 A.M.	6 40
May 1.	2 34	+ 15 5	5 5	11 57 A.M.	6 49

MERCURY.

Mar. 1.	22 58	− 8 27	6 50 A.M.	12 21 P.M.	5 52 P.M.
11.	0 7	+ 0 25	6 50	12 51	6 52
21.	1 6	+ 8 56	6 40	1 11	7 42
Apr. 1.	1 35	+ 13 22	6 10	12 56	7 42
11.	1 21	+ 11 3	5 22	12 0 M.	6 38
21.	1 1	+ 6 13	4 45	11 4 A.M.	5 23
May 1.	1 6	+ 4 26	4 15	10 30 A.M.	4 45

VENUS.

Mar. 1.	19 46	− 19 14	4 17 A.M.	9 9 A.M.	2 1 P.M.
11.	20 32	− 17 40	4 18	9 16	2 14
21.	21 19	− 15 16	4 16	9 23	2 30
Apr. 1.	22 9	− 11 47	4 10	9 30	2 50
11.	22 54	− 8 1	4 3	9 36	3 9
21.	23 38	− 3 49	3 53	9 41	3 29
May 1.	0 22	+ 0 38	3 43	9 45	3 47

MARS.

Mar. 1.	7 27	+ 25 37	1 14 P.M.	8 49 P.M.	4 24 A.M.
11.	7 30	+ 25 11	12 40	8 13	3 46
21.	7 38	+ 24 36	12 12	7 42	3 12
Apr. 1.	7 50	+ 23 46	11 44 A.M.	7 11	2 38
11.	8 5	+ 22 51	11 23	6 46	2 9
21.	8 21	+ 21 47	11 5	6 23	1 41
May 1.	8 39	+ 20 32	10 48	6 1	1 14

Jupiter.

Mar.	1.	14 33	− 13 35	10 45 P.M.	3 58 A.M.	9 11 A.M.
Apr.	1.	14 25	− 12 54	8 34	1 49	7 4
May	1.	14 11	− 11 43	6 12	11 32 P.M.	4 52

Saturn.

Mar.	1.	17 29	− 21 50	2 12 A.M.	6 54 A.M.	11 36 A.M.
Apr.	1.	17 33	− 21 50	12 3	4 55	9 37
May	1.	17 30	− 21 47	10 13 P.M.	2 55	7 37

Uranus.

Mar.	1.	16 25	− 21 32	1 7 A.M.	5 50 A.M.	10 33 A.M.
Apr.	1.	16 24	− 21 31	11 4 P.M.	3 47	8 30
May	1.	16 21	− 21 23	9 3	1 46	6 29

Neptune

Mar.	1.	5 25	+ 21 54	11 29 A.M.	6 48 P.M.	2 7 A.M.
Apr.	1.	5 26	+ 21 57	9 28	4 47	12 6
May	1.	5 29	+ 22 0	7 33	2 52	10 11 P.M.

ECLIPSES OF *JUPITER'S* SATELLITES, P. S. T.

(Off left-hand limb as seen in an inverting telescope.)

			H. M.				H. M.
II, D,	Mar.	1.	8 5 P.M.	II, D,	Apr.	2.	7 44 P.M.
I, D,		3.	11 13	I, D,		3.	1 14 A.M.
II, D,		8.	10 40	I, D,		4.	7 43 P.M.
I, D,		11.	1 6 A.M.	II, D,		9.	10 20
I, D,		12.	7 34 P.M.	I, D,		10.	3 8 A.M.
II, D,		16.	1 15 A.M.	I, D,		11.	9 36 P.M.
I, D,		18.	2 59	I, D,		17.	12 56 A.M.
I, D,		19.	9 28 P.M.	I, D,		18.	11 30 P.M.
III, D,		20.	8 49	I, D,		20.	5 58
III, R,		20.	10 27	III, D,		25.	4 40
II, D,		23.	3 50 A.M.	III, R,		25.	6 14
I, D,		26.	11 21 P.M.	II, R,		27.	7 5
III, D,		28.	12 46 A.M.	I, R,		27.	9 59
III, R,		28.	2 24	I, R,		29.	4 28

(THIRTY-THIRD) AWARD OF THE DONOHOE COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to C. D. PERRINE, Assistant Astronomer in the Lick Observatory, for his discovery of an unexpected comet on September 13, 1898.

The Committee on the Comet-Medal,
JAMES E. KEELER,
CHAS. BURCKHALTER,
WM. M. PIERSON.

January 26, 1899.

(THIRTY-FOURTH) AWARD OF THE DONOHOE COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to WM. R. BROOKS, of Smith Observatory, Geneva, N. Y., for his discovery of an unexpected comet on October 20, 1898.

The Committee on the Comet-Medal,
JAMES E. KEELER,
CHAS. BURCKHALTER,
WM. M. PIERSON.

January 26, 1899.

(THIRTY-FIFTH) AWARD OF THE DONOHOE COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to FREDERICK L. CHASE, of Yale University Observatory, New Haven, Conn., for his discovery of an unexpected comet on November 14, 1898.

The Committee on the Comet-Medal,
JAMES E. KEELER,
CHAS. BURCKHALTER,
WM. M. PIERSON.

January 26, 1899.